AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A ~~R~~reactor~~, in particular~~ for exothermic reactions, ~~of the type~~ comprising:

- a shell (2) of substantially cylindrical shape;

- at least one catalytic bed (3) in the shell, comprising a perforated cylindrical outer side wall (4), which forms a free space (8) with said shell, and an inner side wall (5) coaxial to the ~~previous one~~outer side wall;

- a heat exchanger (13) in said bed (3), said heat exchanger being formed by a plurality of tubes (15) in the form of a spiral~~,~~ or a coil ~~or alike~~ in fluid communication with feed and discharge collectors (14, 16) for a cooling fluid, wherein

~~characterised in that:~~

- said heat exchanger (13) comprises a plurality of superimposed and structurally independent modular units (20), each of which includes at least two tubes (15) in the form of a spiral~~,~~ or a coil ~~or alike~~ arranged transversally to the shell (2) axis ~~(2)~~ and wrapping around a corresponding portion (25) of said inner side wall (5) of said catalytic bed, and provided with respective connecting portions (22, 23) to said feed and discharge collectors (14, 16).

2. (Currently Amended) Reactor according to claim 1, ~~characterised in that~~ wherein each modular unit (20) also comprises ~~also~~ an inner portion (25) of perforated cylindrical wall that builds up a piece or a portion of said inner side wall (5) of said catalytic bed.

3. (Currently Amended) Reactor according to claim 1, ~~characterised in that~~wherein the feed and discharge collectors (14, 16) extend parallel and are housed inside a central duct (10) bounded by the inner side wall (5) of the catalytic bed (3).

4. (Currently Amended) Reactor according to claim 1, ~~characterised in that~~ wherein said modular units (20) further comprise connecting collectors (22, 23) in fluid communication on one end with each spiral of the tubes (15) in the form of a spiral~~,~~ or a coil ~~or alike~~ of said heat exchanger (13) and, on the other end, with said feed and discharge collectors (14, 16).

5. (Currently Amended) Reactor according to claim 1, ~~characterised in that~~ wherein said outer side wall (4) is provided towards its inner part with guide means (27) engageable in guide counter-means (33) provided externally of each modular unit (20).

6. (Currently Amended) Reactor according to claim 1, ~~characterised in that~~ wherein the tubes (15) in the form of a spiral~~,~~ or a coil ~~or alike~~ of each modular unit (20) are housed in an essentially basket-shaped structure provided with a predetermined number of supports (29) extending radially.

7. (Currently Amended) Reactor according to claim 6, ~~characterised in that~~ wherein said basket-shaped structure comprises rays (29) for the support of the spirals having opposed ends hinged to rod-like uprights (28) ~~to enable a variation of the position from flat to conical of~~

~~the spirals as a result of the temperature difference that develops inside the reactor during its operation~~.

8. (Currently Amended) Reactor according to claim 7, ~~characterised in that~~ wherein said rod-like uprights (28) are connectable to each other through a ~~quick clutching~~coupling during the superimposition of said modular units (20).

9. (Currently Amended) Reactor according to claim 1, ~~characterised in that~~ wherein each modular unit (20) further comprises an outer portion of perforated cylindrical wall that builds up a piece or a portion of said outer side wall (4) of said catalytic bed (3).

10. (Currently Amended) Modular unit for heat exchangers (13) to be housed in catalytic beds (3) of reactors, ~~in particular~~ for exothermic reactions, ~~characterised in that it comprises~~ the modular unit comprising at least two tubes (15) in the form of a spiral~~,~~ or a coil ~~or alike~~ arranged transversally to the unit axis, which wrap around an inner cylindrical side wall (5) of the catalytic bed (3), and respective feed and discharge collectors (22, 23) connected to said tubes (15) within said spiral or coil.